# A STUDY OF RETARDED CHILDREN THROUGH TEACHERS' SUBJECTIVE ESTIMATES

By

Bert Anson

Contributions of the Graduate School
Indiana State Teachers College
Number 297



Submitted in Partial Fulfillment
of the Requirements for the
Master of Arts Degree
in Education

1937

The thesis of Bert Anson,
Contribution of the Graduate School, Indiana State Teachers College, Number 297, under the title
A Study of Retarded Children Through Teachers' Subjective Estimates
is hereby approved as counting toward the completion of the Master's degree in the amount of 8 hour's credit.

Committee on thesis:

T. Dewey Annakin
J. R. Shannon
E L Abell, Chairman

Date of Acceptance July 23 '37

TABLE OF CONTENTS

CHAPTER PAGE

CHAPTER PAGE

LIST OF TABLES

## LIST OF FIGURES

# CHAPTER I

## INTRODUCTION

### I. PROBLEM

This study of retarded children was made from teachers' estimates.

The classroom teacher is in the most strategic position to notice, and to assess, the nature of the child's backwardness in school work.[1] The initial selection of most atypical children can be accomplished through the organization already established in a school system, but determination of the causes of deviation is a matter for expert guidance.[2] Teachers can pick out behavior problem children in their classes with a high degree of certainty.[3]

These authorities believe the opinions of the teachers regarding children in their classes have sufficient accuracy for superficial purposes.

---

1 David Fraser Kennedy, Education of the Backward Child. p. 40.

2 G. L. Hilleboe, Finding and Teaching Atypical Children. p. 153.

4 P. M. Symonds, Psychological Diagnosis in Social Adjustment. p. 15.

The study was made to determine the factors observed by teachers in children who had failed of promotion. The frequency of occurrence of any factor was then noted and its importance in contributing to retardation of the child indicated.

There are 10,000,000 handicapped children in the United States. Of these children, 6,500,000 are mentally deficient; the remainder possess physical or behavior impairments.[4]

The purpose of the data collected is to show the effect which mental, physical, social, or environmental handicaps may produce upon the progress of the child in school. It was thought possible that some indication might be given of the effect of the failure in school upon the adjustment of the child. As the data were compiled, another purpose for which the study could be used was indicated. It was the extent to which vital data concerning children are recognized and utilized by teachers. Through the classroom teacher, the results of educational progress are transmitted to the child. By a comparison of the frequency with which important factors in the questionnaire were diagnosed, and the frequency with which such factors may be expected to occur, we may gain some knowledge of the degree to which teachers recognize them.

---

[4] White House Conference on Child Health and Protection, Section IV B. p. 4.

## II. METHOD OF PROCEDURE

Davis[5] quotes Fernald[6] in defining the approach to a study of children: "An accurate and incontestable diagnosis of these cases can be made satisfactorily only after a thorough-going physical examination, knowledge of the family history and records, sex habits, emotional stability, associates, interests--the fullest inquiry as to his general information and practical knowledge."

The purposes of this study demanded data comparable to that data collected in social case work. As the case method was not possible, it was necessary to select an approach which would permit the formation of satisfactory conclusions from the data collected. A survey of the estimates of as large a group of teachers as possible was desired. The normative-survey method of approach was selected as this method of research is best suited to reveal central tendencies or present conditions.

The educational aspects of each field which was entered are the subjects of frequent exploration. Information was sought in this study of current conditions in a definite locality, and over a large number of factors which were present

---

[5] G. P. Davis, What Shall the Public Schools do for the Feeble-minded? p. 10.

[6] W. E. Fernald, "Standardized Fields of Inquiry for Clinical Studies of Borderline Defectives." Mental Hygiene. Vol. I, No. 2. April, 1917. pp. 211-34.

in this locality at that time. The questionnaire type of survey was believed the best method of collecting sufficient data. The estimations of only a few teachers of the causes of retardation of only a few children would be useless. The subjective opinion of all the teachers from the schools in the locality would have been most desirable.

The same information that was sought by Davis[7] was desired. Any factor which might contribute in any way to the failure of the child to receive promotion should be submitted for the teachers' opinion. The information required was easily divided into factors which are classed as physical or mental, and personal, social, or environmental.

## III. COMPILATION OF DATA

The writer was interested in the schools of Huntington County. A brief survey of the number of retarded pupils in one consolidated school of the county indicated that sufficient data could be collected by including the schools of the city of Huntington in the survey. This was agreeable to the purpose of the study; the writer had taught in the city schools and was equally interested in the findings to be made there. The cooperation of the superintendents of the city and rural schools was requested and very generously given.

---

[7] G. P. Davis, op. cit., p. 10.

Child.

The value of the study depended upon the validity of the questionnaire. Wooly and Ferris,[8] Healy and Bronner,[9] Symonds,[10] Charters,[11] Ayres,[12] Terman and Almack[13] were used as authorities for the validity of the items used. The personality trait questionnaire used by the scholarship committee of the Grain Dealers' National Mutual Fire Insurance Company of Indianapolis was also of assistance in preparing the list of personality traits.

The questionnaire was prepared by grouping each item according to its relationship to the physical, mental, social, or environmental factors of the child's life. The size of the questionnaire was arbitrarily limited to one page to assist the teachers in marking it. This condensation in size required a combination of various closely related traits of personality. The combination of these traits was necessary in a few instances because of overlapping in meaning. The work of the references given was therefore followed only as the material suited the purpose of this study.

---

[8] H. T. Wooly and Elizabeth Ferris, Diagnosis and Treatment of Young School Failures. pp. 102-113.

[9] William Healy and A. F. Bronner, Delinquents and Criminals. pp. 179-182.

[10] P. M. Symonds, Psychology Diagnosis in Social Adjustment. p. 19.

[11] W. W. Charters, The Teaching of Ideals. pp. 117-326.

[12] L. P. Ayres, Laggards in Our Schools. pp. 1-131.

[13] L. M. Terman and J. C. Almack, The Hygiene of the School Child. pp. 1-78.

To facilitate marking, a single check indicated the answer to each item, except in the few cases where enumeration or remarks was necessary. The latter situation was necessary in order to obtain some points of information on the home environment.

The questionnaire as finally prepared is to be found in the Appendix. The top spaces identify the child to the teacher. Physical defects or diseases by which children might be handicapped are named, and their presence in the case of the child can be indicated by a check. A table of twenty-three traits of personality is given.

Symonds has given a list of sixteen traits of good citizenship,[14] and a list of twenty-eight requirements used in the selection of members of the National High School Honor Society.[15] Elimination of overlapping reduced the number to twenty-three.

The table is graduated into five degrees: very low, low, average, good, and superior, to conform to the grouping of intelligence as it is used by Terman.[16] A check mark indicates the degree in which any trait is possessed by the child. This list was arranged in alphabetical order, with the qualitative values graduated in ascending order. The group adjustments

---

[14] P. M. Symonds, "Psychological Diagnosis in Social Adjustment." pp. 136-137.

[15] Ibid., pp. 152-154.

[16] L. M. Terman, "The Intelligence of School Children." p. 71.

named include both desirable and undesirable. A check mark indicates the presence of any one of them.

Certain definite facts were required in studying the influence of home and environmental conditions. These were kept as few as possible, because of the difficulty of obtaining definite facts; it was expected that the teachers could more easily recall general impressions of conditions.

Selection of the group of children to be rated by the teachers was determined by several considerations. A sufficient number could be obtained by using the retarded children of several years. If the results of the failure of the child be studied, a lapse of time since the failure would allow the teacher to observe the child in the new grade. A period of three years since the date of failure was believed to be the least amount of time during which the teacher could form valid conclusions on the adaptations of the child. The group was therefore limited to failures during the years 1928-1933 inclusive.

Failure is made by subjects, not grades, after the sixth year in most of the schools of this district. Failures which caused the child to associate with a group of children younger than himself were used to study social adjustment or lack of it. Failure in the upper grades is not as frequent as in the primary and elementary grades. Therefore, only the children whose failure occurred in grades one to six were included. The group was still further limited later. The county records of the children of the rural schools did not include the names

of children previously graduated or eliminated. Only the records of children enrolled during 1935-36 were available. This was not true of the city records; the number of children from the city schools will therefore be somewhat disproportionately large.

"When two people examine an individual, they give different estimates of the amount in which the same trait is possessed."[17] For this reason, three questionnaires were prepared for each child, to be marked by three different teachers. The results of the three questionnaires should give a more valid estimation of the child than would the estimate of a single teacher.

The questionnaires were submitted to the teachers by the writer in person. This was believed necessary to assure the prompt return of the data. The marking in some instances required many hours' work by the teachers. Two factors which limited the amount of data returned were the absence of many teachers, and inability to remember children who attended school for only a short time.

When finally presented to the teacher, each questionnaire had on it the name of the child who had failed while attending the school at which the teacher was employed, the year of failure, and the grade failed. The failures were made in the grades; very few of the children have yet attended high school. For these reasons, the questionnaires were submitted only to elementary teachers. Principals of grade schools were asked

---

17 W. W. Charters, The Teaching of Ideals. p. 326.

to cooperate in a few instances. In no case was a high-school teacher used to obtain the ratings.

It was desirable to know if the factors contributing to retardation, as given by the tabulation of the data, agreed with the theories held by the teachers. These theories concerning failure might also be used for purposes of comparison with recent testing and measuring advances in educational fields.

A second brief questionnaire was prepared. Nine factors which are considered to have a definite place in contributing to retardation were prepared.

Mental effort, group adjustment, and industriousness were factors used by McElwee in a study of accelerated, normal, and retarded children.[18] The factors of mental ability and results of intelligence tests were included to secure a view of the attitude of this group of teachers toward the use of intelligence tests. The remaining factors were selected from Ayres.[19]

One of the second questionnaires was given to each teacher marking the first group. The factors were arranged so that the teacher could indicate, in the desired order, his estimation of the relative importance of the factors in contributing to the failure of the child.

---

[18] E. W. McElwee, "A Comparison of the Traits of 300 Accelerated, Normal, and Retarded Children." Journal of Educational Research. 26:31, September, 1932.

[19] L. P. Ayres, Laggards in Our Schools. pp. 118, 121, 122, 131, 157, 169, 220.

Ninety-seven children were failed, and eighty-seven conditioned or complimentarily passed, according to the city school record for 1933. A section of the second questionnaire gave six possible causes of this type of passing, and the teachers were asked to rank these factors, as they had done in the case of the failures.

Table I presents a general view of the data which will be used in the study.

The methods used in preparing the data were not satisfactory. There was no possibility of a comparison of the frequencies of factors with like factors of the unretarded group in the same schools. The only comparisons to be made were with results of other studies. From these comparisons, general conclusions could be reached upon the validity of the teacher ratings. Where marked variations exist, the causes must be indicated.

One thousand one hundred twenty-seven questionnaires were returned for diagnosis. They included at least one rating on each of 565 children, two on many children, and three on many more. In presenting the data, percentages were based on the total number of possible times the factor could have been marked. This discarded the individual child as the basis of comparison. One child might be marked for one trait three times, in the same or in different graduations on the scale. By using a large number of estimations, a valid method for arriving at generalized conclusions should be obtained.

If it had been possible to secure three ratings on each child, an average could have been taken, and the results been

TABLE I

ENUMERATION OF COMPILED DATA

| | |
|---|---|
| Number of retarded children | 565 |
| Questionnaires submitted | 1,695 |
| Questionnaires returned | 1,127 |
| Per cent of questionnaires returned | 66.49 |
| Total school population | 4,853 |
| Number of schools (city) | 6 |
| Number of schools (rural) | 8 |
| Teachers returning data | 44 |

used. One teacher's opinion was not believed reliable enough. The use of only those questionnaires giving estimations of the same child by two or by three teachers would have limited the data to a useless number.

# CHAPTER II

## PRESENTATION OF DATA

### I. TRAITS OF PERSONALITY

The section of the questionnaire which had the most subjectivity was scored with the most definiteness and frequency. This condition may have been due to several different factors. These should be considered with the data: teachers feel confident of an ability to estimate traits of personality; the teachers' knowledge of the child was limited to the mental and personal traits exhibited in the classroom; general impressions of a personality are retained longer in the memory than is definite knowledge of environmental, social and physical attributes.

Table II presents the tabulation of the personal and mental qualities attributed to the group of 565 retarded children. The teacher marked the degree in which each trait was believed possessed by each child. The individual questionnaires were then counted, to obtain a composite picture which is shown in Table II.

The range of frequencies was between 1,124 and 952, of a total of 1,127. The data were changed from alphabetical order, to positions of ascending order. Figure 1 presents the line of central tendency, or median point on the scale.

TABLE II

FREQUENCY OF RATING ON PERSONALITY SCALE

| Traits | Very Low | Low | Average | Good | Superior | Total |
|---|---|---|---|---|---|---|
| Aggressiveness | 251 | 550 | 221 | 16 | 3 | 1,041 |
| Alertness | 230 | 575 | 240 | 32 | 3 | 1,080 |
| Application | 280 | 534 | 248 | 54 | 3 | 1,119 |
| Aptitudes | 217 | 552 | 247 | 43 | 3 | 1,062 |
| Attentiveness | 225 | 530 | 167 | 52 | 3 | 977 |
| Carefulness | 201 | 479 | 303 | 49 | 13 | 1,045 |
| Cheerfulness | 105 | 299 | 460 | 154 | 24 | 1,042 |
| Confidence of playmates | 156 | 339 | 452 | 111 | 15 | 1,075 |
| Consideration | 97 | 315 | 517 | 103 | 11 | 1,043 |
| Cooperativeness | 111 | 290 | 504 | 204 | 15 | 1,124 |
| Honesty | 109 | 110 | 516 | 186 | 31 | 952 |
| Industriousness | 250 | 425 | 318 | 78 | 15 | 1,086 |
| Intelligence | 295 | 416 | 321 | 53 | 5 | 1,090 |
| Leadership | 253 | 426 | 321 | 50 | 7 | 1,057 |
| Motor ability | 188 | 341 | 379 | 127 | 20 | 1,055 |
| Neatness | 178 | 322 | 430 | 99 | 23 | 1,052 |
| Nervous control | 179 | 354 | 444 | 80 | 5 | 1,062 |
| Obedience | 92 | 235 | 449 | 183 | 35 | 995 |
| Responsibility | 131 | 392 | 413 | 108 | 16 | 1,060 |
| Sincerity | 85 | 262 | 502 | 175 | 35 | 1,059 |
| Sportsmanship | 90 | 242 | 546 | 158 | 17 | 1,052 |
| Sympathy | 77 | 233 | 544 | 177 | 18 | 1,049 |
| Truthfulness | 103 | 210 | 515 | 195 | 38 | 1,061 |

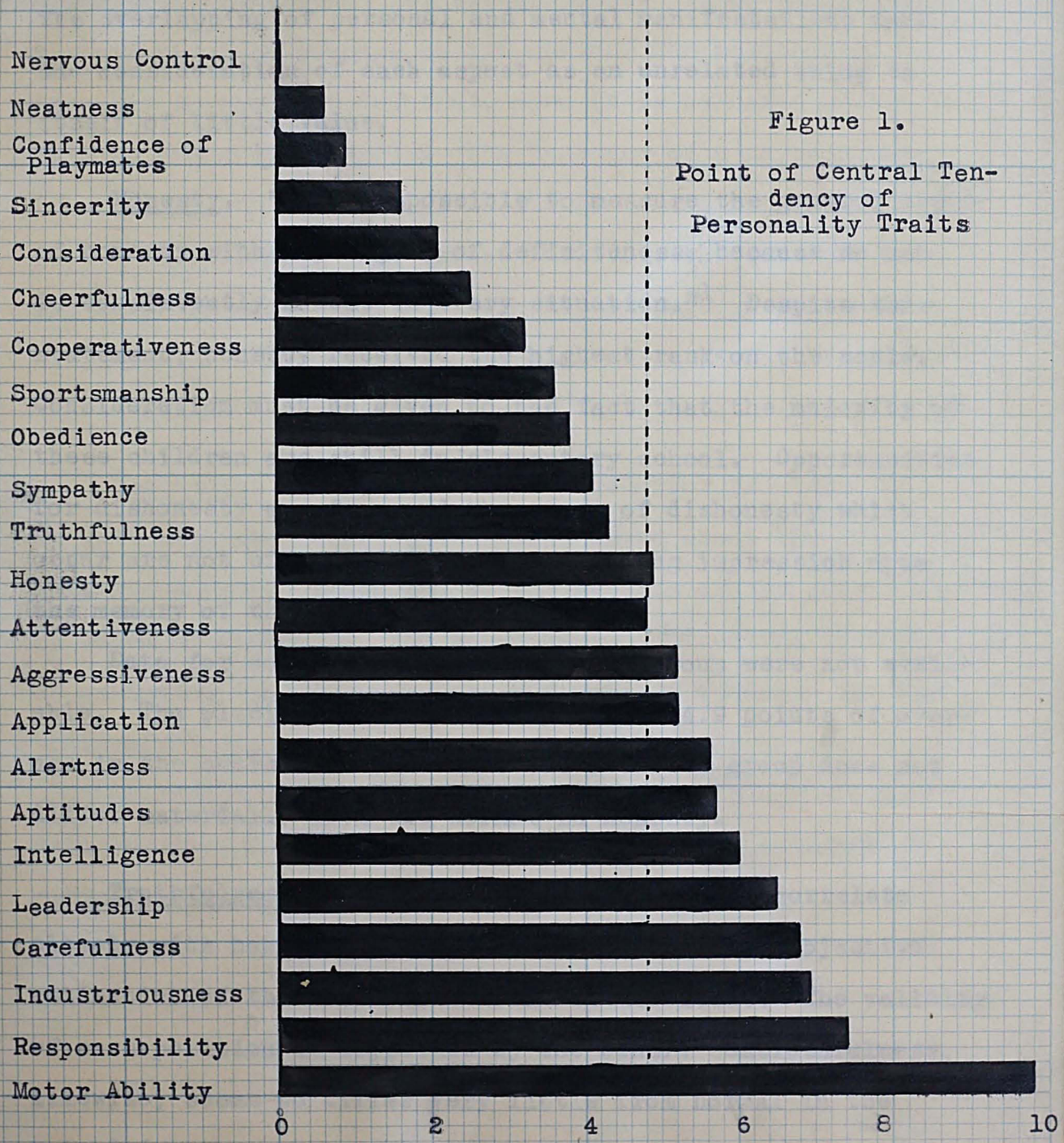


Figure 1.

Point of Central Tendency of Personality Traits

The data for each trait are presented individually. Possible relationships with other factors are presented. The overlapping of personal and mental manifestations make the consideration of each aspect as an unrelated thing in itself of little value.

Honesty. "It is impossible to measure the general trait of honesty with any degree of definiteness, because no man is consistently honest in every situation."[1] Despite this statement, honesty received the highest rank on the scale. Consideration must be given to the fact that the majority of these children are still in elementary school. Opportunities for dishonesty are few, and the cases of dishonesty which occur are not of a nature to make a strong impression upon the memory of the teachers.

Data for comparison with a control group were not available. The placing of the median point at 4.9 points of average in the scale indicates that the retarded group does not differ materially from the normal in honesty.

Truthfulness. Truthfulness is expected to correlate closely with honesty. Any differentiation in a subjective estimation of the two traits would be difficult. The validity of each position is supported by the other. Untruthfulness, likewise, seems to differ very little from normal in the retarded group.

---

[1] W. W. Charters, The Teaching of Ideals. p. 325.

Sympathy. The median point for sympathy is only one tenth point lower than for truthfulness. It is still near the mid-point of average on the scale. The position of sympathy is somewhat doubtful, when it is compared to the data on group adjustments. The presence of a large number of children who are misfits in the grade group might be expected to influence this trait. However, the teachers rank the retarded group very close to the average in possession of sympathy. The smallest number of cases in the "very low" degree was given this trait.

Obedience. "Among both sexes, behavior problems increased with the intelligence level up to about 119 I. Q."[2] This statement is supported by the results of the questionnaire as shown by Figure 1. The group has a low central tendency of estimated intelligence, and a favorable tendency for the trait of obedience.

An additional contribution would be the study of the data received for the purpose of comparing the children of estimated average intelligence with those of estimated low intelligence on the basis of traits of behavior. "There has been too much tendency to imply that the existence of personality and behavior deviations will impair educational achievement."[3]

---

[2] Luton Ackerson, Childrens' Behavior Problems. p. 251.

[3] R. H. Paynter and Phyliss Blanchard, A Study of Educational Achievement of Problem Children. p. 62.

Sportsmanship. Some difficulty was expected in marking this trait. Sportsmanship is so closely associated with playground activity that it is overlooked as an aspect of classroom work. A recognition of the rights of others is at variance with the development of the child at beginning school age. Development of this viewpoint is a part of the social adaptation of the school. The number of children rated socially unadapted would be expected to lower the central tendency of this trait.

Ackerson found at the Illinois Institute of Research in a study of 5,000 children, that the favorable traits increased with age level,[4] and markedly so with the intelligence level.[5] The presence of the number of children of average or better intelligence would seem to have an influence upon the rating of sportsmanship.

Cooperativeness. Terman names the child's attitude toward the teacher as an important cause of failure.[6] The child who does things in a very sincere manner is often given more credit that his performance warrants.[7] Though non-cooperativeness may be a serious behavior problem, the teachers do not class this trait as of frequent occurrence in this group of children. It is ranked sixth most favorable.

---

[4] Ibid., p. 251.
[5] Ibid., p. 252.
[6] L. M. Terman, The Intelligence of School Children. p. 97.
[7] H. J. Baker, Characteristic Differences in Bright and Dull Children. p. 9.

Cheerfulness. There is a drop of seven tenths of one point from the position of cooperativeness to that of cheerfulness. Two and five tenths points from the bottom of the average scale indicates a deviation from normal.

Lowered cheerfulness in the group might be the result of physical impairment, social maladaptation, or environmental factors. This is an illustration of overlapping. The question must be considered as to the effect of the failure on the cheerfulness of the child. It might be possible to trace failure in school to the same factors which caused this trait to be lowered.

Shannon approaches this question with the statement "All children, both bright and dull, are destined to have some kind of experience. Might not a school environment adapted to the needs of the duller pupils, as well as the bright, be conducive to greater happiness in the long run for the greater numbers?"[8] This question approaches the study of retardations in their ultimate effect on the individual.

Consideration. Consideration for others is ranked eighth most favorable trait. Its position is interesting as a reflection of the influence of social maladjustments. Consideration should be one of the criteria of successful association with playmates. Sportsmanship is considered a closely related trait, but its median point is 1.5 points higher in the scale than the median point of consideration.

---

[8] J. R. Shannon, "A Philosophy of Fundamentals." p. 150 Phi Delta Kappan, Vol. 15-16, February, 1933.

Sincerity. Sincerity is separated from honesty and truthfulness in this survey. The difference of central tendencies is material--3.3 points and 2.6 points, respectively.

Compensatory behavior patterns might influence the position of sincerity, such as efforts to please the teacher, while the child was unable or unwilling to grasp the learning situation. The child very early learns the value of pleasing the teacher, and may "bluff" to attract attention or cover inabilities. The same patterns account for attempts at social recognition, and may be considered as insincerity.

Confidence of playmates. Confidence of playmates may be expected to receive fairly unfavorable rating. So many traits necessary to successful group activity are placed in the low degree of achievement. There is considerable overlapping of the characteristics necessary to congenial association. The median point is very little above the low degree. The retarded group is markedly below normal in this trait, according to the teachers estimates.

Neatness. The economic and cultural status of the home is closely associated with this trait. Estimations of the cultural level were believed impractical for this study. Based on economic influence only, this group rating supports association of neatness and environment. One hundred thirty-nine homes are classed as squalid. This number might possibly exert an influence on the median point of neatness, out of proportion to its actual value.

Baker[9] suggests a different interpretation. He assigns neatness an important place in causing school failures, by its subjective influence upon the teacher. He says, "Care of external detail is taken as symptomatic of care in mental detail," implying that lack of neatness in person suggests mental carelessness and lack of effort by the child.

Nervous control. The line of central tendency of this trait lies between the low and average degrees on the scale. The same number of cases occur in the very low and low sections, as occur in the average, good, and superior sections.

The traits under nervous control are definitely estimated below normal in tendency. These traits are of more definite significance to a study of retardation. The traits in which the group approaches the normal tendencies are significant in isolated cases. Their importance is diminished in a quantitative survey.

Nervous control implies an element of nervous maturation. Actual cases of low or very low mentality might influence the rating, because of the immaturity of the nervous development. A close relationship is therefore expected between intelligence and nervous control.

Motor ability. The low position of motor ability is contrary to expectation, when compared to the number of children who are classed as leaders in playground activity. Fifteen boys included in the group are at present outstanding in high school athletics.

---

[9] Baker, op. cit., p. 10.

Several explanations of possible influences in the position of this trait should be considered. Wilson[10] found the use of the Binet test to be of little value in predicting muscular efficiency. He would expect little correlation between muscular ability and intelligence in the children of average or dull-normal intelligence. In the cases of children of deficient mentality, the extent of nervous control or maturation should be considered as a possibility. This would be reflected by the degree of motor ability of the child.

Motor ability has importance to this study for its possible influence upon the subjective estimation of the child's abilities.[11] Its unfavorable position in this study indicates two possible conclusions. Low motor ability may effect the estimation of the child's intelligence, or a combination of the other factors contributing to failure may produce lowered motor ability.

Responsibility. The median point of responsibility is 2.5 points below that for motor ability. The ten lowest traits are grouped in a range of 2.6 points. These ten therefore might be considered in their relationships to each other, as well as to failure. The trait of responsibility is the result of a combination of attributes. A child capable of carrying responsible actions to a conclusion must present other abilities

---

[10] F. T. Wilson, Learning of Bright and Dull Children, p. 48.

[11] Baker, op. cit., p. 8.

to a favorable degree. The presence of carefulness, alertness, intelligence, and others in a still lower position indicates that in the teachers' estimations these traits are overlapping.

Ingram[12] states the mentally retarded child will respond inadequately to such social traits as dependability, while the dull-normal is capable of more adequate adjustments. The possible effects of social maladjustments due to lack of dependability seem significant.

Industriousness. Presentation of these data should be accompanied by an enumeration of the phases by which it may effect failure.

(1) What proportion of the children of average or better intelligence owe their failure to lack of mental effort?

(2) To what extent are dull or deficient children passed because of their industriousness?

(3) How much of the lack of effort was due to behavior patterns of physical deficiency?

This study makes no attempt to answer these questions, but they should be considered in evaluating the data.

The importance assigned to mental effort as a criterion of failure is a part of the second questionnaire submitted to the teachers. It will be presented in a separate section. Evidence of the degree to which failure is caused by lack of effort in children of normal intelligence will be indicated.

---

[12] C. P. Ingram, Education of the Slow Learning Child. p. 6.

Industriousness is assigned to a position of utmost importance in desirable classroom attitudes. Whether the unfavorable position of this trait in the retarded group is a cause or a result of failure is problematical. The data do not indicate the proportionate effect on mental effort of low mentality, physical deficiencies, environment, or social maladaptations. The data do indicate an unfavorable relationship to these factors.

Carefulness. The position of this trait is influenced by the same considerations evident in the presentation of industriousness. The data do not differentiate between cause and effect. The retarded group is estimated to be below normal in possession of this trait.

Leadership. Ingram[13] classes leadership as a correlate of intelligence in which retarded and dull children respond inadequately. The data place it 0.5 of a point above and adjoining intelligence. The result of such proximity from a large quantity of data indicates a close correlation of the two traits in teachers' estimations.

Leadership is approached in a more positive manner in the data on group adjustments. Its possible contributions to failure will be presented there.

---

13 Ibid., p. 6.

Intelligence. The group median was point 6.0 in the low degree of the scale. The per cent of each degree was: very low, 27; low 38.2; average, 29.45; good, 4.86; and superior, .46.

The reliability of subjective estimates of intelligence is questioned. Pintner[14] reports a study by Whipple on this subject. Teachers were asked to select thirty superior children. Eleven of those selected tested below 110 intelligence quotient. Twenty more were considered only average. Of these six were found superior, and one tested 167 in intelligence.

Low and very low intelligence are expected in a retarded group. This survey can only indicate various factors accompanying low intelligence, and the possible results of retardation upon such a group.

There is greater significance in the fact that 34.77 per cent of this group has intelligence estimated to be average or better. This study is an effort to discover the factors which may cause this group to fail of promotion.

Freeman[15] states that the variations of intelligence by the Binet test are due to heredity in about two-thirds of the cases, and the remainder to environment. Variations in children of the same family are due entirely to heredity;

---

[14] G. M. Whipple, "Classes for Gifted Children," In Rudolf Pintner's Intelligence Testing, p. 273.

[15] F. N. Freeman, "Heredity and Environment in the Determination of Intelligence." Bulletin of School of Education, Indiana University, Vol. II, December, 1934. pp. 19-27.

the environment is practically the same. Wallin[16] believes that physical defects are the cause of seven per cent of educational retardation. They have an important bearing on retardation through attendance as well as through effects of disease and defects.

"There are many intelligent children who become retarded simply because of special inability to grasp one of the fundamental tools of learning--reading, spelling or arithmetic--and are lost to education for the want of an adequate analysis of the difficulty."[17] Ten questionnaires returned from one school were marked "reading." The cause was that given by Hollingsworth.

There is the possibility that many of this group were failed for these reasons given: environmental, physical, or special disabilities. The factors remaining for unsuccessful adaptation to educational demands are personality, or behavior patterns. The data of this section present the frequencies assigned these traits in this group.

Huntington county schools inaugurated a testing program in 1936. The Otis self-administering tests of mental ability were used. The test scores were used to evaluate the reliability of subjective classification of the intelligence of children when made by classroom teachers.

---

[16] J. E. W. Wallin, "Studies of Mental Defects and Handicaps." Miami University Bulletin, 1924. p. 164.

[17] L. S. Hollingsworth, Special Disabilities that Contribute to Retardation in School Status. p. 54.

Terman's[18] classification of intelligence in five groups was used, as shown in Table III.

TABLE III

NUMERICAL VALUES OF TERMS USED BY QUESTIONNAIRE TO CLASSIFY INTELLIGENCE OF CHILDREN

| Intelligence quotient scores | Terman's classification | Classification used in teachers' questionnaire |
|---|---|---|
| 120 - up | Very superior | Superior |
| 119 - 110 | Superior | Good |
| 109 - 90 | Average | Average |
| 89 - 80 | Inferior | Low |
| 79 - down | Borderline to defective | Very low |

The rating of the child's intelligence used by the teacher was changed to the corresponding numerical values given by Table III, and compared to the score made by the child on the Otis test. Table IV was then compiled to compare the accuracy of subjective opinions with actual test scores.

---

[18] L. M. Terman, "The Intelligence of School Children," p. 71.

TABLE IV

DEGREE OF VARIATION OF SCORES ACHIEVED BY 193 RETARDED CHILDREN ON OTIS SELF-ADMINISTERING TEST OF MENTAL ABILITY AND CLASSIFICATION OF MENTAL ABILITY SUBJECTIVELY GIVEN THEM BY CLASSROOM TEACHERS

| Variation | Number | Per cent of total |
|---|---|---|
| Teachers' classification agreed with test score | 67 | 34.71 |
| Teachers rated child's I. Q. 20-30 points higher than Otis test score | 21 | 10.88 |
| Teachers rated child's I. Q. 10-20 points higher than Otis test score | 46 | 23.83 |
| Teachers rated child's I. Q. 10-20 points lower than Otis test score | 47 | 24.35 |
| Teachers rated child's I. Q. 20-30 points lower than Otis test score | 12 | 6.92 |
| Total | 193 | 99.99 |

The quality work expected from the child depends largely upon the teachers' estimation of that child's ability. The accuracy of that estimation in the one hundred ninety three cases presented was only 34.71 per cent correct. Seventeen and one tenth per cent of the cases present a marked variation. The most significant examples were the

cases of two children with test scores of 58 and I. Q.'s of 63, who were judged by their teachers to be of average intelligence. Presumably they were retarded for failure to perform classroom work of average acceptability. The scores indicate they are definite borderline or defective cases.

Good teaching procedure indicates that had the teacher's opinions of these cases been properly checked, opportunities for adjustments might have been revealed. The child unable to compete in classroom work with pupils of the same age, and the child who is equal to such work, but whose performance is so low that remedial work is necessary, deserves more than hit-or-miss knowledge on the part of the teacher.

Aptitudes. Aptitudes are placed below intelligence in possession by the group. This indicates that the special abilities of the group as a whole are limited, or that aptitudes were estimated only as a degree of learning readiness. The questionnaire failed to clarify this point, and the data lack value for that reason. A group of retarded children is expected to have a low average for learning readiness. Special manual abilities are expected to be higher, and the data place motor ability in a much more favorable position. This may also be an indication of failure to discover special abilities and interests.

Alertness. Alertness may be manifested in two ways: mental and physical. A few questionnaires carried a note

explaining that alertness was marked in different degrees of the scale for mental or physical performance. The possibility of misconstruction prevents the attaching of much value to the data. Comparison with social traits of leadership in class or playground seems to indicate the low position of alertness was due to consideration of the mental aspects of this trait. This is only an assumption. Inclusion of both types of alertness in the questionnaire would have presented a valuable opportunity for comparison.

Whatever conception was in the minds of the teachers, alertness was placed only 0.8 of a point from the lowest rank. Only thirty-four questionnaires were marked above average in its possession. Terman[19] believes the absence of alertness causes failure by lowering the subjective estimate of the child's intelligence by the teacher. Ingram[20] takes the position that lack of alertness is a manifestation of lack of intelligence. The influence of alertness could be emphasized if the data gave the number of failures of average intelligence who are rated low in this trait.

Application. Application is considered by Terman[21] and Baker[22] as another trait which leads teachers to mistaken

---

[19] L. M. Terman, The Intelligence of School Children. p. 96.

[20] Ingram, op. cit., p. 6.

[21] Terman, op. cit., p. 96.

[22] Baker, op. cit., p. 8.

estimations of children. A sincere and conscientious application to duties receives undue credit in consideration for promotion. The opposite implication is that a lack of application may contribute unduly to failure.

The data seem to substantiate the implication, to the extent that the group which has failed is below normal in possession of the trait. The data cannot be compared with Terman's[23] findings of the degree of application of which low mentalities are capable. This would require a knowledge of the data with respect to native capacity. The degree in which this trait is present can seem to indicate only an unusual amount of faulty behavior patterns, or a lack of mental capacity.

Aggressiveness. Aggressiveness and application have the same median point. Aggressiveness consists of a combination of traits, most of which are given in the lower part of the table.

An important part of the study of aggressiveness is not available; tests of the school population at periodic intervals would give the correlation of this trait before and after failure. The contribution of this trait to failure may be important. The data merely place it in an unfavorable position. Educational sociology would find more important the effect of failure on aggressiveness.

---

[23] Terman, op. cit., p. 96-97.

The social implication of the data on aggressiveness in this group is emphasized by the scoring in Table II. Only nineteen cases of a total of 1041 are marked as having better than average possession of this trait.

Attentiveness. Attentiveness was rated lowest of the twenty-three traits on the scale. The median point is 4.8. Half of the 977 cases were placed in the very low and half of the low degrees.

The data reveal an interesting condition in connection with honesty, obedience, and attention. These three traits are very closely related to school discipline. They received the least number of checks on the questionnaires. This does not prove any condition, but does seem to indicate that personal characteristics are not impressed upon the mind of the teacher with equal permanence.

## II. PHYSICAL DEFECTS

The list of physical deficiencies placed on the questionnaire was limited. The familiarity and recognition of other defects would have been of value to the study, but school teachers are not expected to be trained in health or medical work. Possible glandular, internal, or sense disturbances were not included because of the difficulty of detection.

"It has been demonstrated that physical defectiveness had an important and distinct bearing on the progress of

children."[24] "Physical defects both directly and indirectly constitute a cause of backwardness in achievement."[25] Wallin[26] gives the estimate of one writer who says that physical defects and disabilities are the cause of seven per cent of pedagogical retardation, five per cent of elimination, and five per cent of non-promotion. Bisch[27] gives three causes for mental retardation. They are functional disturbances in the mind, environment, or organic defects. Thirteen deficiencies and defects are given in detail.

The selection of such a small number of physical characteristics was determined upon because of the period of years which had elapsed since most children had been under the observation of these teachers. Only defects leaving a lasting impression on other individuals were believed to be of value. In spite of this precaution some of the items of physical deficiencies were almost valueless, if a remark made by one teacher, and later repeated by others, was to be believed. This was a statement that a child had suffered from a chronic ailment, but the teacher had never discovered the cause.

---

[24] Ayres, op. cit., p. 131.

[25] J. N. Mallory, A Study of the Relation of Some Physical Defects to Achievement. p. 75.

[26] Wallin, op. cit., p. 164.

[27] L. E. Bisch, Clinical Psychology. p. 76.

This series of quotations is given to emphasize the importance of physical factors to the diagnosis of failure in school. The data will be presented with the same purpose as the section on personal characteristics--to indicate the validity of the data by comparison with other studies.

Nutrition. In 1931, the White House Conference on Child Health and Protection estimated the number of undernourished children in the United States at 1,000,000. The percentage ranged from 60 per cent in parts of Alabama to 4 per cent in good communities.[28]

Table V indicates the process used to obtain measurements of comparison. Three hundred seventy-nine cases marked malnutrition comprise 33.54 per cent of the possible total. For purposes of comparison, 33.54 per cent of the total of 565 pupils gives 190 pupils undernourished. The data are in such form that this method seems the most valid for purposes of presentation. To extend the data farther, the 190 children are 3.92 per cent of the school population of 4853 pupils. The result shows 3.92 per cent of malnutrition of the total school population, found in a group of 11.6 per cent of the total.

These data indicate the agreement of the teachers with the statement of Terman and Almack, "Adequate nutrition is

---

[28] White House Conference on Child Health and Protection. Section III, F 1931. p. 397.

TABLE V

PHYSICAL DEFECTS

| Defective factor | Total marked | Per cent of possibilities | Per cent of school population |
|---|---|---|---|
| Nutrition | 379 | 33.4 | 3.92 |
| Weight | 305 | 27.0 | 3.15 |
| Eyes | 212 | 18.8 | 2.19 |
| Speech | 184 | 16.3 | 1.89 |
| Teeth | 131 | 11.6 | 1.36 |
| Height | 116 | 10.3 | 1.19 |
| Ears | 65 | 5.77 | .68 |
| Limbs | 17 | 1.5 | .16 |

the foundation of healthy growth, and the lack of it is the most productive cause of low vitality which favors tuberculosis and other diseases."[29] According to the White House Conference reference given, this group of 11.6 per cent of the total school population contains nearly all of the undernourished children to be found in those schools.[30] Though this would indicate the presence of malnutrition in the group, the data could not be considered valid. The criteria for undernourishment used by the teachers would be of value in interpreting the data.

Weight. "It is acknowledged that weight alone is not a satisfactory criterion of nutrition, except in a general way, but may be used as a convenient general index."[31] The relative frequency of marks received by weight and nutrition is comparatively close, 379 to 305, but the difference indicates that weight was not used as the only criterion for malnutrition.

Deviation of this group from the normal could be obtained from health records of the entire body of schools surveyed. These records are made but were not available at the time the study was made.

---

[29] L. M. Terman and J. C. Almack, The Hygiene of the School Child. p. 46.

[30] White House Conference on Child Health and Protection, Section III, F 1931, p. 397.

[31] "Economic Trends and the Weight of Children." School and Society, Vol. 39, pp. 25102. February 24, 1934.

Eyes. Eighteen and eight tenths per cent of the retarded group were believed to have defective vision. The results compare closely to another subjective teacher estimate made by an Illinois Normal School survey of 1918.[32] This survey of 3,477 children by 106 teachers found 19 per cent having defective vision.

The Rockerfeller Endowed American Youth Commission of 1936[33] found 34 per cent of 5,000,000 people between the ages 16 and 24 years had defective vision. However, the White House Conference of 1933[34] estimated only 65,000 children in the United States had impaired vision. Merry[35] gives 19.75 per cent as the proportion of children having correctable eye defects.

With surveys differing so widely in findings, there is some indication that local conditions will be a deciding factor in the presence of defective vision.

In rating the influence of physical defects on school progress, Mallory[36] presents the following list:

---

[32] "The Relation of Certain Physical Defects in Children to their Progress in School." Illinois Normal School, No. 8, September, 1918. pp. 5-9.

[33] Time Educational Supplement. April 20, 1936. p. 46.

[34] White House Conference on Child Health and Protection. Section IV B. 1933. p. 4.

[35] R. V. Merry, Problems in the Education of Visually Handicapped Children, p. 7.

[36] J. N. Mallory, A Study of the Relation of Some Physical Defects to Achievement in the Elementary Schools. p. 75.

Degree of Handicap

(1) Nasal obstruction and mouth breathing

(2) Defective teeth

(3) Defective hearing

(4) Defective tonsils

(5) Defective eyes

This is based on the assumption that compensatory action by the eyes will take place. The implication is that the eyes may suffer as a result, and this is a substantiation of the findings of the American Youth Commission for ages 16 to 24.[37]

Speech. Sixteen and three tenths per cent of the total responses indicated defective speech. This is 1.89 per cent of the entire school group. A careful analysis supports the validity of this finding. The obviousness of most speech defects makes their detection more simple than defects of eye or ear.

Speech defects are divided into three classes: stuttering, phonetic defects, and the speech of mental defectives.[38] All three classes are expected in a large group of retarded children. Ayres[39] states that many defects disappear with growth and age. This would seem especially true in certain classes of speech defects. Fifty-three per cent of these children

---

[37] Time Educational Supplement. April 20, 1936. p. 46.

[38] G. L. Hilleboe, Finding and Teaching Atypical Children. p. 20

[39] Ayres, op. cit., pp. 122-3.

were failed in the first grade, and 85 plus per cent in the first three grades. Speech defects, especially phonetic defects of immaturity, could be expected at the time of retardation.

The extent to which immaturity, as indicated by defective speech, causes retardation in the primary grades is vital to this study. It could only be made by comparing the present data with those collected on the normal group at the same period.

Defective speech seems to be a contributing factor to failures when compared to Wallin's[40] survey of St. Louis. Two and eight tenths per cent of 89,057 children had speech defects. The writer's findings present 16.3 per cent of speech defects in a group of 11.6 per cent of the total school population, or 1.8 per cent defects for the whole. This amount is disproportionate.

Teeth. Eleven and six tenths per cent of the total questionnaires received checks for defective teeth. In comparison, the American Youth Commission[41] found 50 per cent of 5,000,000 people of ages 16 to 24 to have various teeth defects. Mallory[42]

---

[40] Wallin, op. cit., pp. 126-7.

[41] Time Educational Supplement. April 20, 1936. p. 46.

[42] Mallory, op. cit., p. 75.

found defective teeth to be a greater handicap to children, through contributing effects, than defective tonsils or eyes.

The data presented here must have some qualifying statements. There is no means of discovering the criteria used for estimating the defects. School children of this age are getting their permanent teeth. Cavities and misplaced teeth are very common. The data seem to indicate that only malformations received the notice of the teachers.

Height. Ten and three tenths per cent of the questionnaires were marked for deficient height. Local factors would necessitate height norms for the total school population, to arrive at a conclusion concerning the relation of height deficiency to retardation. A lack of glandular and hereditary height data for the retarded group also limits the usefulness of the findings.

Weight. Weight occupies a much less favorable position in Table V than does height. Twenty seven per cent of this group of children were estimated to be deficient in weight, more than twice the estimated height deficiency. When these two deficiency groups are interpreted in terms of the total school population, it appears that a small group of children furnishes an unfavorable condition to society, without consideration of the additional height and weight deficiencies of children of normal educational progress. No studies were available of the correlation to be expected between height and weight deficiencies in children.

Ears. Defective hearing was present in 65 cases, 5.77 per cent of the total returned. A comparison with other studies shows a discrepancy which may be due to local factors, or failure of the teachers to discover deficiencies actually present.

The Western Illinois Normal School[43] survey found 15 per cent of the children had defective hearing. The White House Conference of 1933[44] estimated 20 per cent of the handicapped children of the United States have defective hearing. This is a total of 2,000,000, thirty times the amount of visual defectiveness.

Such a wide variation creates uncertainty as to the validity of the data of this study.

Limbs. The presence of crippled children in the classroom or school should create an impression which would assure the validity of this data. The obviousness of the deformity is in contrast to the difficulty in detecting most physical defects.

The checks numbered seventeen, 1.5 per cent of the total. Local factors should be considered in the effect of this condition on failure. There is no census of these schools which would reveal the number of crippled children in the normal group. The causes of the deformities would be necessary

---

[43] "The Relation of Certain Physical Defects in Children to Their Progress in School." Illinois Normal School, No. 8. September, 1918. pp. 5-9.

[44] White House Conference on Child Health and Protection. Section IV B, 1933. p. 4.

in forming any conclusions on this factor. Infantile paralysis was marked only twice on the questionnaires. This seems to eliminate this disease as a causal factor in the majority of cases. A case study of each of the limited number of cases would be the only satisfactory approach to a study of this group of children.

The White House Conference of 1933[45] estimates 300,000 crippled children in the United States. Abt[46] places the number at 264,276 and says that, "While this number seems fairly constant, conditions in various localities will alter the proportion."

Diseases. Diseases enumerated were those expected to contribute to physical deficiencies. Three diseases were added by teachers. Sores were added in five cases, all for children of one family. This section was not expected to be accurate, except in cases of pronounced lasting effect. The result justified the use of this section. Each case checked for scarlet fever was checked for eye defects. The same was true in the case of infantile paralysis and crippled limbs.

The importance of local factors is emphasized by this section. County-wide free diphtheria vaccination is

---

45 White House Conference on Child Health and Protection. Section IV B, 1933. p. 4.

46 H. E. Abt, The Care, Cure, and Education of the Crippled Child. p. 69.

TABLE VI

FREQUENCY OF DISEASES

| Disease | Frequency |
|---|---|
| Scarlet Fever | 40 |
| Rickets | 9 |
| Diphtheria | 6 |
| Sores | 5 |
| St. Vitus Dance | 3 |
| Infantile Paralysis | 2 |
| Tuberculosis | 1 |
| Asthma | 1 |
| Meningitis | 0 |

periodically used. The death rates per 100,000 in the United States for scarlet fever and diphtheria are 3.8 and 2.1 respectively.[47] This is a difference of 1.7 persons per 100,000.

## III. SOCIAL ADJUSTMENT

The primary purpose of this study was to observe the effects of retardation on the social adaptations of the child.

---

[47] Metropolitan Life Insurance Company, Statistical Bulletin, Vol. 16, June, 1935.

Reliance upon the subjective opinions of the teachers in rating social conditions is based on Hilleboe[48] and Kennedy-Fraser.[49]

Comparison of the social traits of two groups of retarded children is difficult. The basis of retardation for the two groups may be very dissimilar. Therefore the data will be presented without numerous comparisons. Possible causal factors will be included to assist the evaluation of the data.

Instead of using a rating scale, as in the case of the personality traits, both positive and negative adaptations were used to furnish a comparative basis for the group itself. There are no comparisons with the normal group available; the finding of positive and negative adaptations was believed to be the most satisfactory approach.

Social adaptations are not isolated traits, but the result of combining many traits in a manner which leads to successful associations with playmates.

The cases which have made unsuccessful adaptations will be considered relative to data presented in other parts of this study.

Evidence of faulty behavior patterns was expected to be more clearly recognizable by the teachers if time were allowed for observation since the failure. "It seems certain

---

48 Hilleboe, op. cit., pp. 1-153.

49 Kennedy-Fraser, op. cit., pp. 40-45.

that emotional conditioning with a learning situation may cause a special disability, which in turn may lower achievement as a scholar; the school failure in turn may produce undesirable compensatory behavior patterns."[50] The suggestion of this point is that maladjustments which are regarded as minor, may become of major importance, and so be more easily detected.

Sex adjustment. Table VII gives the frequencies of marks upon sex adaptations, and the per cent of each in relation to the questionnaires returned. The children who failed most recently are in primary and intermediate grades. Play in these is usually designed to accustom the children to equality and lack of selfconsciousness between the sexes. The data seem to indicate a satisfactory situation from that point of view.

There is no apparent connection between failure, and playing with the opposite sex, except as it indicates the presence of other factors. Factors involved may be mental, personal, or environmental. The small percentage of pupils who habitually play with the opposite sex seems to be favorable in this group.

Between the ages of six or seven, and fourteen to sixteen, which period includes most of the numbers of the group studied, the normal psycho-sexual development is the homo-sexual or latent stage. During this period play with the child's own

---

[50] Paynter and Blanchard, op. cit., p. 62.

TABLE VII

GROUP ADJUSTMENT

| | Frequency | Per cent |
|---|---|---|
| Played with own sex | 826 | 73.29 |
| Misfit in group before failure | 309 | 27.42 |
| Misfit in group after failure | 222 | 19.69 |
| Played with younger pupils | 150 | 12.42 |
| Played with older pupils | 120 | 10.65 |
| Leader on playground | 95 | 8.43 |
| Misfit before and after failure | 90 | 7.9 |
| Played with opposite sex | 56 | 4.97 |
| Leader in class | 27 | 2.39 |
| Played with both sexes | 19 | 1.69 |

sex is to be expected. This stage of development progresses with pubescence to that of phantasying, before an interest in the opposite sex is entirely normal.[51]

Class homogeneity. The three factors of group adjustment, and of playing with children of other ages, are a general

---

[51] W. V. Richmond, "An Introduction to Sex Education." pp. 171-174.

overview of the child. The teachers expressed a purely subjective summary of the personal and social adaptations of the child.

The number of children who were estimated to be socially maladjusted is large. The fact that 53.28 per cent of the failures occured in the first grade of school may account for the fact that 7.73 per cent more pupils were misfits in their grades before failure than after failure. The data do not present the proportion of failure in the first grade which was due to inability to share in the activities of the group. The fact that the failure of the child corrected the social adjustment of the child to a slight degree leads to two further points of interest. In what way did the failure benefit the child, and why were not more children benefited by the process of retardation?

The importance of failure in contributing to social difficulties is seen in the large number estimated as misfits in the group after failure. This number would be decreased by subtracting the number who were misfits both before and after failure. It would still be 10 per cent of the entire group.

Shannon[52] would base homogeneous grouping on social age alone. Symonds[53] would have the individual prepared to take his place in society. Either would object to the implications

---

[52] J. R. Shannon, "A Tale of Two Tin Cans." School and Society, Vol. 41, January-June, 1935, pp. 194-196.

[53] P. M. Symonds, Psychological Diagnosis in Social Adjustment. pp. 2-3.

found in 19.69 per cent of a group of children being socially maladjusted. The process of retardation has apparently not solved this problem in this group.

Social retardation is exhibited in habitually playing with younger children. This is frequently the first indication that the child is not achieving the proper adaptations. Twelve and forty-two hundredths per cent of the group exhibited this trait.

The child with a low intelligence quotient may be placed with a group of children of equal mental and social age but lower chronological age. The more rapid advancement of the group will require retardation at more or less regular intervals for the child who is being constantly outgrown mentally and socially. This common occurance seems to apply to the group of children who seek still younger playmates than were provided by failure in a previous grade.

Failure has placed 12.0 cases below their proper social level. Whatever the cause of the failure, these children associate with older children from another grade. This group of children would be probably the best for purposes of follow-up study to supplement this survey. They are estimated to be retarded in grade. A study of the personality and social causes made would be of real value.

The criteria used by the teachers in marking leadership on the playground are doubtful. The factor should have been more clearly defined in the questionnaire. To illustrate the difference: one boy of this group was selected by his team

mates, on one of the state's outstanding basketball teams, as the most valuable player. Yet a boy who was five years younger, and had been accelerated in school, was selected team captain.

Wilson[54] finds that the Binet test gives only slight assurance of the quality of performance of any task, and even more uncertainty where the performance involves gross muscular movement. The playground activities are directed at big muscle exercise, and the conclusion seems to be that mental levels have slight relation to playground performance.

The data become more significant to the purpose of the study if actual leadership was the criterion used. Leadership and intelligence are closely related.[55] This group contains a large proportion, 34.8 per cent, estimated to have average or better intelligence.

Eight and forty-three per cent were marked leaders on the playground. Compared with either criterion used, this proportion seems low. Wilson[56] would expect to find little difference between the retarded and normal groups on the basis of muscular ability. Ingram[57] would expect evidences of leadership from the group having normal intelligence.

---

[54] Wilson, op. cit., p. 48.

[55] Ingram, op. cit., p. 6.

[56] Wilson, op. cit., p. 48.

[57] Ingram, op. cit., p. 7.

Failure is usually employed in an effort to improve class work. This method seems to have failed to produce leaders in the class. The 27 cases marked constitute 2.4 per cent of the questionnaires marked, and 0.29 per cent of the total population of the schools. The result has been very limited in terms of outstanding scholastic improvement through repeating the work of a grade.

## IV. ENVIRONMENTAL FACTORS

The section of the questionnaire dealing with home environment contained eight parts. These were separated into sixteen spaces for responses by check or enumeration A larger number of combinations was obtained to deal with factors necessary to this survey. They were not specifically requested by the questionnaire, but could be obtained from the data given. These factors were then placed in nine groups for presentation.

Economic status of the home. The number of children from homes of poor economic status was slightly larger than from average homes. These data are interesting, but this factor detracts from their use. They cannot be compared to data on the homes of the remainder of the school population, as estimated by the same standards. The data will be used chiefly in evaluating the other factors of this section.

The mere presentation of the data on the home status is not sufficient for the purpose of this study. Though the data

TABLE VIII

ECONOMIC STATUS OF HOMES

| | Number | Per cent of total, 1127 |
|---|---|---|
| Poor | 469 | 44.88 |
| Average | 433 | 41.43 |
| Squalid | 139 | 13.3 |
| Wealthy | 4 | .38 |
| Marked | 1045 | 92.72 |

themselves are not authoritative enough for final conclusions, the inclusion of this item in the questionnaire is justifiable.

Palmer[58] made a follow-up study to an earlier study to determine the effect of the economic depression on the weights of children. "Most important of all would be a rating scale of the family, showing not only the economic and cultural level, but also the adequacy of parental care and control." This latter is of course, of major importance in case studies. If retardation is studied in view of its possible effects on the child, the approach is equally important here.

---

58 C. E. Palmer, Growth and the Economic Depression. Public Health Report. 40:1277, October 20, 1933. School and Society, Vol. 39. pp. 251-2, February 24, 1934.

Queen[59] finds rebellion by the child at unfavorable economic comparisons. This rebellion produces behavior patterns which may influence school achievement.

Broken homes. The data on the per cent of homes for the normal group are not available for purposes of comparison. Queen[60] states that the number of broken homes correlates with some local factor, rather than with some factor in a large area. The difference between homes broken by death and those broken by separation agrees very closely with the findings of Slawson,[61] who found a much larger percentage due to death than separation. He did not find the number constant, however.

In Juvenile Court Statistics of 1930,[62] the Children's Bureau presented data on 53,000 cases from the courts of 83 cities. Twenty-three per cent were from homes broken by death, and 10 per cent from homes broken by separation. Healy and Bronner[63] have the same general findings.

The contribution to failure may be varied. The orphan is considered unfortunate from an economic standpoint. Influences on the personality of the child may be of more

---

59 S. A. Queen, and W. B. Bodenhafer, and E. B. Harper, Social Organization and Disorganization. p. 159.

60 Queen, Bodenhafer, Harper, op. cit., p. 170.

61 J. Slawson, "The Delinquent Boy." (1926). p. 366. Queen, Bodenhafer, Harper, op. cit., p. 171.

62 Juvenile Court Statistics, 1930. p. 8. Queen, Bodenhafer, Harper, op. cit., p. 171.

63 William Healy and A. F. Bronner, Delinquents and Criminals. p. 121.

TABLE IX

BROKEN HOMES

| | Number | Per cent |
|---|---|---|
| By death | 133 | 11.8 |
| Father dead | 91 | 8.07 |
| Mother dead | 42 | 3.73 |
| Both dead | 8 | .71 |
| Separated or divorced | 50 | 4.44 |
| Total broken | 183 | 16.24 |

importance. Queen[64] says that it is the failure of the survivor to meet the parental situation; the child may attempt to dominate the home; step-parents may be unsympathetic; relatives may intervene, and incur the jealousy of the child.

Size of family. Many questionable answers were discarded. The replies were frequently given with a question mark added to denote uncertainty. The data presented in the tables are only those answers given by the teachers with a reasonable degree of certainty. The number of brothers and sisters living and dead will be presented separately.

---

[64] Queen, Bodenhafer, Harper, op. cit., p. 151.

TABLE X

NUMBER OF CHILDREN IN FAMILY

| Number of children | Frequency |
|---|---|
| 9 or more | 27 |
| 8 | 100 |
| 7 | 50 |
| 6 | 132 |
| 5 | 107 |
| 4 | 63 |
| 3 | 50 |
| 2 | 55 |
| 1 | 73 |
| Total cases | 657 |
| Total siblings | 3,265 |
| Family average | 4.95 |

The large number of cases in which retarded children belong to families having six or more children is significant. The data do not present a normal curve for a decreasing number in the large families; the number remains almost constant. An average of 4.95 per family is reached by using each questionnaire as a possible opportunity to score, as was done for the traits of personality.

Thurstone's study is useful in comparing these data with retardation.

> The variability of intelligence does not change noticeably with increase in size of family in this research. If there is a negative relation between economic status and size of family, then the children of high ordinal number will be of lower average

> intelligence not because they are later born, but because they are drawn from families of lower social scale.[65]

This latter is also closely associated with the ordinal positions of the failues. Another section will be used to present these data.

TABLE XI

NUMBER OF BROTHERS AND SISTERS DEAD

| Number dead | Frequency |
|---|---|
| 1 | 32 |
| 2 | 26 |
| 3 | 1 |

The data on the number of brothers and sisters dead proved very unsatisfactory. Many responses were question marks. The results are given to show the neglect commonly given to a factor sociologically valuable in the diagnosis of problem children. A case study of living children requires knowledge of dead siblings, and their manner of death. This is especially true in a study of typical children. Congenital disease or deficiencies, parental adjustments and economic condition of the home may give added knowledge of infant deaths and miscarriages.

---

[65] L. L. Thurstone, Order of Birth, Parent Age, and Intelligence. p. 51.

Ordinal positions and frequencies. The data giving the number of brothers and sisters in the same family were compiled in three tables, giving as many different views of the family as possible. The data were limited by the large number of questionable responses.

TABLE XII

BROTHERS AND SISTERS OF THE CHILD FAILED

| Number | Brothers older | Brothers younger | Sisters older | Sisters younger |
|---|---|---|---|---|
| 1 | 243 | 216 | 304 | 222 |
| 2 | 179 | 103 | 109 | 95 |
| 3 | 64 | 36 | 53 | 39 |
| 4 | 37 | 1 | 18 | 14 |
| 5 | 6 | 1 | 13 | 6 |
| 6 | 5 | 0 | 3 | 3 |

The number of cases is the same in Table XII as in Table IX. In place of the number alone, the older and younger siblings are enumerated. The failed child had more older than younger siblings in eleven cases, and equal numbers in the twelfth. Most of the cases had one or two siblings either older or younger. Table XII also presents a clearer view of the family than Table IX.

TABLE XIII

ORDINAL POSITION

| Position | Frequency |
|---|---|
| 1 | 93 |
| 2 | 166 |
| 3 | 176 |
| 4 | 134 |
| 5 | 64 |
| 6 | 38 |
| 7 | 30 |
| 8 | 11 |
| 9 | 5 |
| 10 | 6 |

Thurstone[66] believes that children of high ordinal position are not subnormal in intelligence because of their ordinal positions. Any subnormality is due to birth in families in which low cultural and economic levels frequently may be accompanied by numerous children.

Table XIII presents the ordinal position of the child failed. The first position may be disproportionate. The cases in which no mark was given to any item in the

---

66 L. L. Thurstone, Order of Birth, Parent Age, and Intelligence. p. 5.

environmental group were not used; this may have meant the subject was the only child of the family. It probably indicated unfamiliarity with the number of brothers and sisters.

Frequencies of first and last born. There were 251 cases, 22.27 per cent of the total returned, who were the youngest children in the family. By comparing this figure with Tables VIII, X, and XIII, an indication of the economic force in social factors is apparent. The size of the family influences or is an indication of the economic and cultural level of the home. Thurstone[67] refers to a study by Goodenough and Leahy[68] in which the latter found the youngest child group had no appreciable difference in behavior traits from other children.

The data of this study differ also in the frequency with which oldest children are included. There were 93 cases recorded, 14.02 per cent fewer than the number of youngest children. Thurstone[69] has found that the first born were problem children with a disproportionate frequency. The group was composed of problem children in the educational sense, though not necessarily in their manner of behavior. Queen[70] thinks that the arrival of the second child presents a vital problem of social adaptation.

---

[67] Ibid., p. 81.

[68] Ibid., p. 81. Goodenough and Leahy, "The Effect of Certain Family Relationships on the Development of Personality." Pedagogical Seminary. XXXIV, 1927, p. 45-71

[69] Thurstone, op. cit., p. 25.

[70] Queen, Bodenhafer, and Harper, op. cit., p. 146.

One fact may contribute to the weighing of these data. Most of these children are in the elementary grades. It is probable that more children will be born to many of the parents. The number of cases now considered last born will be decreased. This fact will also influence Tables X, XI, and XIII. The size of the families will be increased in all likelihood.

Failures in the same family, Table XIV. There were 359 cases, 31.85 per cent, who had brothers or sisters fail in school. The cases in the group studied, with their siblings, total 1,189. The average for those families in which more than one child failed was 3.31 failed. There were 68.15 per cent of the cases that had only one failure in the family. Thirty-one and eighty-five hundredths per cent averaged 3.31 children failed in each family.

TABLE XIV

BROTHERS OR SISTERS FAILED

| Number | Frequency |
|---|---|
| 1 | 137 |
| 2 | 102 |
| 3 | 33 |
| 4 | 45 |
| 5 | 42 |

Defectives, Table XV. A summary was made of five items from the questionnaire which told of mental defectives in the family. This table presents a means of comparing these cases with the data of the entire group.

The child which was the subject of the questionnaire undoubtedly was the defective member of the family in some cases. This is obvious from the fact that 57 per cent of the subjects were of very low estimated intelligence. The most significant point of this table seems to be the average size of the families possessing mentally defective members. This average size of the families of the retarded group was 4.95 children in each family, compared to an average of 5.6 children in the group containing mental defectives. This seems to be a significant variation in terms of hereditary factors. A much larger number came from average or poor homes than from squalid ones.

Crimes and delinquencies. Table XVI presents important differences from Table XV. The distribution of intelligence is almost equal. The 4.3 children per family is lower than the group average. The greatest variation is in status of the home, where children from squalid home conditions are nearly equal to those from poor, and those from average homes are nearly free from delinquencies. The small number of broken homes agrees with the studies of Shaw and McKay[71] in Chicago, who found that broken homes have little effect upon delinquency.

---

[71] "Report on Causes of Crime." pp. 264-284. Queen, Bodenhafer, and Harper, p. 192.

TABLE XV

SUMMARY OF EIGHTY-ONE QUESTIONNAIRES ON WHICH MENTAL DEFICIENCIES IN THE FAMILY WERE INDICATED

| Status of the Home | Intelligence of subject | Children in family | | Physical defects among family | Crime or delinquency in family |
|---|---|---|---|---|---|
| | | Number of children | Number of families | | |
| Poor . . . 33 | Very low . 37 | 2 . . . . . 9 | | 39 | 6 |
| Average . 23 | Low . . . 15 | 3 . . . . . 9 | | | |
| Squalid . 0 | Average . 13 | 4 . . . . . 5 | | | |
| Broken . 6 | | 5 . . . . . 6 | | | |
| | | 6 . . . . . 7 | | | |
| | | 7 . . . . . 13 | | | |
| | | 8 . . . . . 5 | | | |
| | | 9 . . . . . 3 | | | |
| | | 10 . . . . . 5 | | | |

TABLE XVI

SUMMARY OF FIFTY-THREE QUESTIONNAIRES ON WHICH CRIMES OR DELINQUENCIES IN THE FAMILY WERE INDICATED

| Status of the home | Intelligence of subject | Children in family | | Physical defects among family | Crime or delinquency in family |
|---|---|---|---|---|---|
| | | Number of children | Number of families | | |
| Poor . . . 22 | Very low . . 14 | 2 . . . . . | 10 | 23 | 6 |
| Squalid . 20 | Low . . . . 13 | 3 . . . . . | 8 | | |
| Average . 4 | Average . . 18 | 4 . . . . . | 9 | | |
| Broken . . 2 | | 5 . . . . . | 2 | | |
| | | 6 . . . . . | 2 | | |
| | | 7 . . . . . | 6 | | |
| | | 8 . . . . . | 3 | | |
| | | 9 . . . . . | 0 | | |
| | | 10 . . . . . | 1 | | |

The number of cases is 53, 4.7 per cent of the total group. This applies to the entire family, and not necessarily to the child itself, so there is no check upon the group to compare it with the figures of the Committee on Delinquency.[72] This agency found in 1928 that almost one per cent of the children of juvenile age in the United States came before the courts of delinquents. Local factors seem to be of influence in this respect, as Huntington County in 1935 had forty-nine children in state institutions for delinquents.[73] This is 0.77 per cent of the school population of the entire county.

Healy and Bronner[74] have found no correlations between physical findings and delinquencies, except among girls. So-called over-development shows a slight tendency to be above normal in this case. Richmond explains this as the result of early adolescence with its accompanying increases in stature, weight and frequent maladjustment of sex impulses.[75] Defects were present in 5 per cent more cases among delinquents than among defectives. The per cent for the entire group is not available.

---

[72] White House Conference on Child Health and Protection. 1931. p. 342.

[73] Indiana Board of State Charities, Bulletin 221, June, 1935. p. 28.

[74] William Healy and A. F. Bronner, Delinquents and Criminals. p. 208.

[75] W. V. Richmond, An Introduction to Sex Education. p. 171.

## V. GRADE OF FAILURE

Non-promotion in the first grade supplied 53.28 per cent of the children of the group.

TABLE XVII

FREQUENCY OF FAILURES BY GRADES FOR 565 CHILDREN

| Grade | Number | Per cent of failures | Per cent of school population |
|---|---|---|---|
| 1 | 301 | 53.28 | 6.19 |
| 2 | 94 | 16.64 | 1.92 |
| 3 | 90 | 15.93 | 1.86 |
| 4 | 51 | 9.03 | 1.05 |
| 5 | 20 | 3.52 | .41 |
| 6 | 9 | 1.59 | .019 |
| Total | 565 | | 11.7 |

Table XVIII gives a related study made of 107 pupils referred to psychological clinics because of academic failure.

Mental immaturity is frequently the cause given for first grade failure. The rate of failure for this cause in Table XVIII is slightly less than half the total per cent of failures in Table XVII. We cannot differentiate between the number of cases of immaturity and other causes in Table XVII, but the

TABLE XVIII[76]

FACTORS RELATED TO MALADJUSTMENTS IN SCHOOL

| Cause of Failure | Number | Per cent of school population | Per cent of all cases of failures |
|---|---|---|---|
| Mentally immature | 67 | 7 | 25 |
| Special defects | 25 | 3 | 10 |
| Personality difficulties | 15 | 2 | 6 |

relationship seems to be an important factor in failure in the first grade.

The data are valid for use in determining the actual grade proportion of failure in this school system. The rates of failure shown are for the period of 1928-33 inclusive, a total of six years. This is in contrast to the examples given by the Elementary School Journal. South Carolina in 1932 had a yearly retardation rate of 10.7 per cent;[77] a Peabody

---

[76] R. F. Street, "Factors Related to Maladjustment in School." Elementary School Journal. Vol. 34. May, 1934. p. 677.

[77] "First Grade Progress in South Carolina Elementary Schools." Elementary School Journal. Vol. 34. October, 1933. pp. 89-91.

College field study reported 16 per cent retardation in the first grade, and 8 to 10 per cent retardation in other grades.[78]

---

[78] Ibid., "Non-Promotion in Elementary Schools." Field Study No. 4. George Peabody College for Teachers.

# CHAPTER IV

## TEACHERS' CRITERIA

The purpose of the second questionnaire has been explained as an effort to correlate the theories of failure with the actual practice used on this same group of children. The point of central tendency will be used to rank the nine factors used. The totals for each factor vary; not every teacher marked each factor on the questionnaire.

### I. FAILURE

The points of interest of Table XIX are the first and last factors. The method of determining mental ability is not given; it does not seem to be by use of mental tests. It may be questioned whether mental ability was interpreted as educational achievement. There seems to be no reason for the separation of mental ability and tests except a possible distrust of the latter.

Lack of mastery of subject fundamentals was only a few points below mental ability. The child is failed if a "ground work" of fundamentals is not prepared. The data show that the result has been sucessful in .24 per cent of the cases to the extent of producing leaders in the class. Data on the class grades were available for most of the rural

Figure 2.

Teachers Evaluation of Factors Contributing to Failure

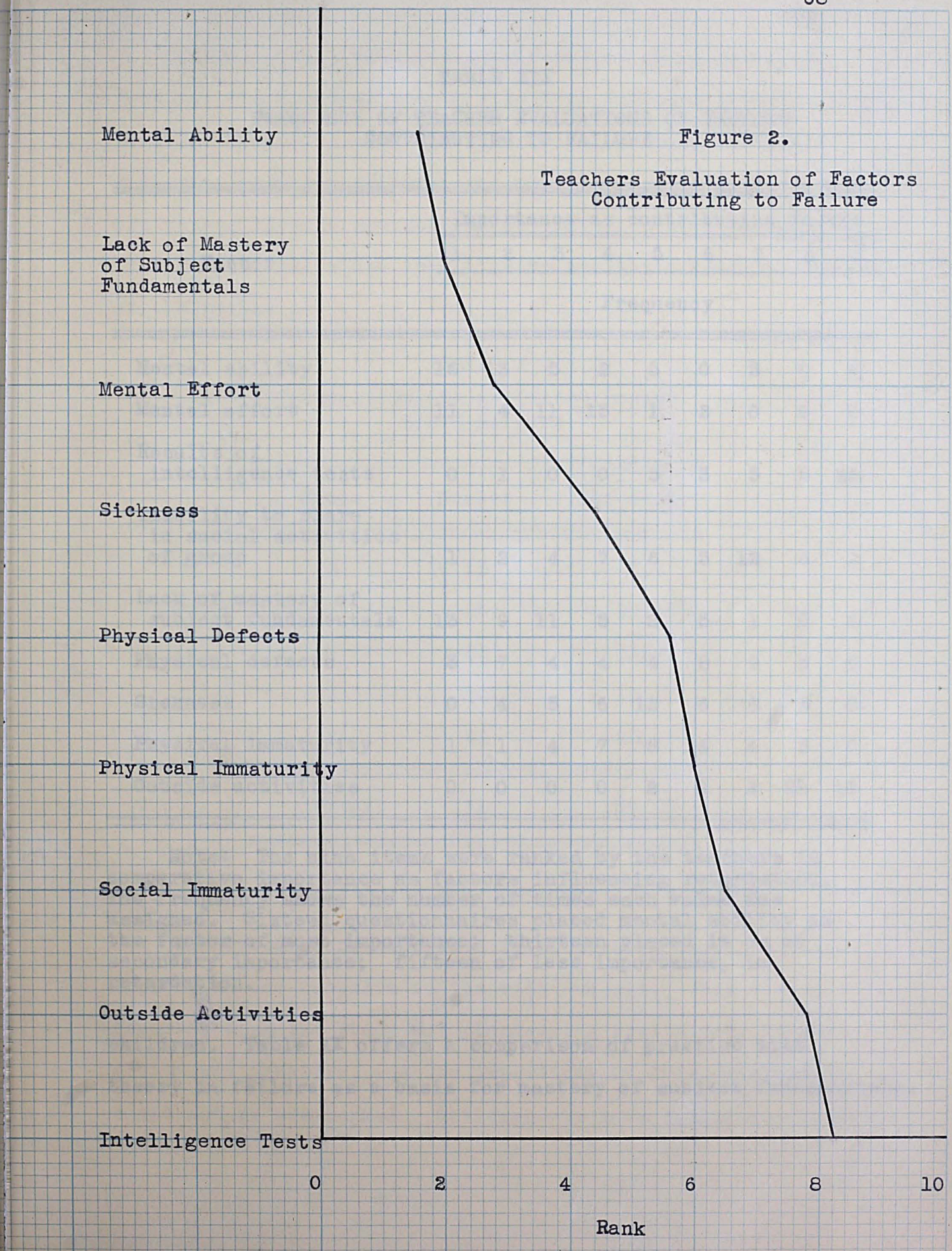

TABLE XIX

FREQUENCY OF TEACHER EVALUATIONS OF FACTORS CONTRIBUTING TO FAILURE

| Factor | Importance as contributing factor | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| | Frequency | | | | | | | | |
| Mental ability | 16 | 13 | 5 | 2 | 5 | 0 | 3 | 0 | 0 |
| Mental effort | 11 | 4 | 11 | 15 | 1 | 2 | 0 | 0 | 0 |
| Results of intelligence tests | 0 | 1 | 0 | 0 | 5 | 3 | 5 | 5 | 23 |
| Inability to share in social activities of group | 1 | 2 | 4 | 7 | 6 | 3 | 12 | 6 | 1 |
| Lack of mastery of subject fundamentals | 13 | 9 | 11 | 3 | 2 | 5 | 1 | 0 | 0 |
| Physical defects | 3 | 7 | 4 | 4 | 4 | 8 | 9 | 3 | 0 |
| Sickness | 0 | 4 | 5 | 6 | 12 | 6 | 6 | 5 | 0 |
| Physical immaturity | 1 | 1 | 4 | 7 | 8 | 14 | 4 | 3 | 0 |
| Outside activities | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 21 | 17 |

Note: The nine items were ranked by the teachers in comparative importance as factors influencing retardation. The frequency shows the number of times each value was assigned. Sixteen questionnaires placed mental ability as the factor of most importance; thirteen placed it as of secondary importance; fifteen of less importance, in retardation.

children. Table XX offers a comparison of practice with theory in failure as a basis for mastery of subject fundamentals.

Mental effort is given consideration as an important factor. The broadest use of this term includes patterns of behavior producing maladaptations with learning situations. Sickness, physical defects, and mental and social immaturity are rather closely grouped but not rated as of great importance. Outside activities and intelligence tests are near the bottom of the scale.

TABLE XX

AVERAGE GRADES OF 171 CHILDREN SINCE FAILURE

| Grade | Number | Per cent |
|---|---|---|
| B | 13 | 7.6 |
| C | 35 | 20.41 |
| D | 56 | 32.75 |
| E | 26 | 14.12 |
| F | 41 | 23.98 |
| Total | 171 | 100.00 |

## II. CONDITIONING AND COMPLIMENTARILY PASSING

Conditioning or complimentarily passing nearly equaled failing on one occasion in the city schools. This was unforeseen when the study was planned. A preliminary investigation was possible, and the importance of this development could not be overlooked. Children who have failed are passed

to the next grade. The considerations which cause this passing are vital. There appear to be reasons why the failure is considered of less importance than the advancement of the child. These reasons for arbitrarily moving the child to the next grade might indicate recognition of various disadvantages in failure, and place educational achievement in a position of subordinate importance. The data present the findings by the same method used for Table XIX and Figure 2.

Inability to learn is given as the chief reason for passing pupils regardless of achievement. The five other factors are all rated in the lower half of the scale. This seems to indicate that the social and physical factors included do not receive much consideration. The child is compelled to repeat a grade, no matter what group, sex development, or age difference exist between himself and the new group.

The even distribution shown in Table XXI illustrates the wide variation among teachers concerning this practice.

TABLE XXI

FREQUENCIES OF EVALUATION CONTRIBUTING TO CONDITIONING OR COMPLIMENTARILY PASSING

| Factor | Importance of contributing factor | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| | Frequency | | | | | |
| Age | 7 | 5 | 11 | 7 | 9 | 2 |
| Size | 3 | 8 | 6 | 8 | 8 | 10 |
| Sex development | 2 | 5 | 6 | 12 | 8 | 9 |
| Adjustment to group | 7 | 10 | 7 | 4 | 7 | 7 |
| Mental ability | 13 | 7 | 6 | 4 | 2 | 6 |
| Industriousness | 6 | 6 | 5 | 9 | 8 | 8 |

38

Note: The six items were ranked by the teachers in comparative importance as factors influencing conditioning or complimentarily passing children. The frequency shows the number of times each value was assigned. Seven questionnaires placed age as the factor of most importance; five as second in importance; eleven as third in importance, and the remainder assigned it a position of lesser importance.

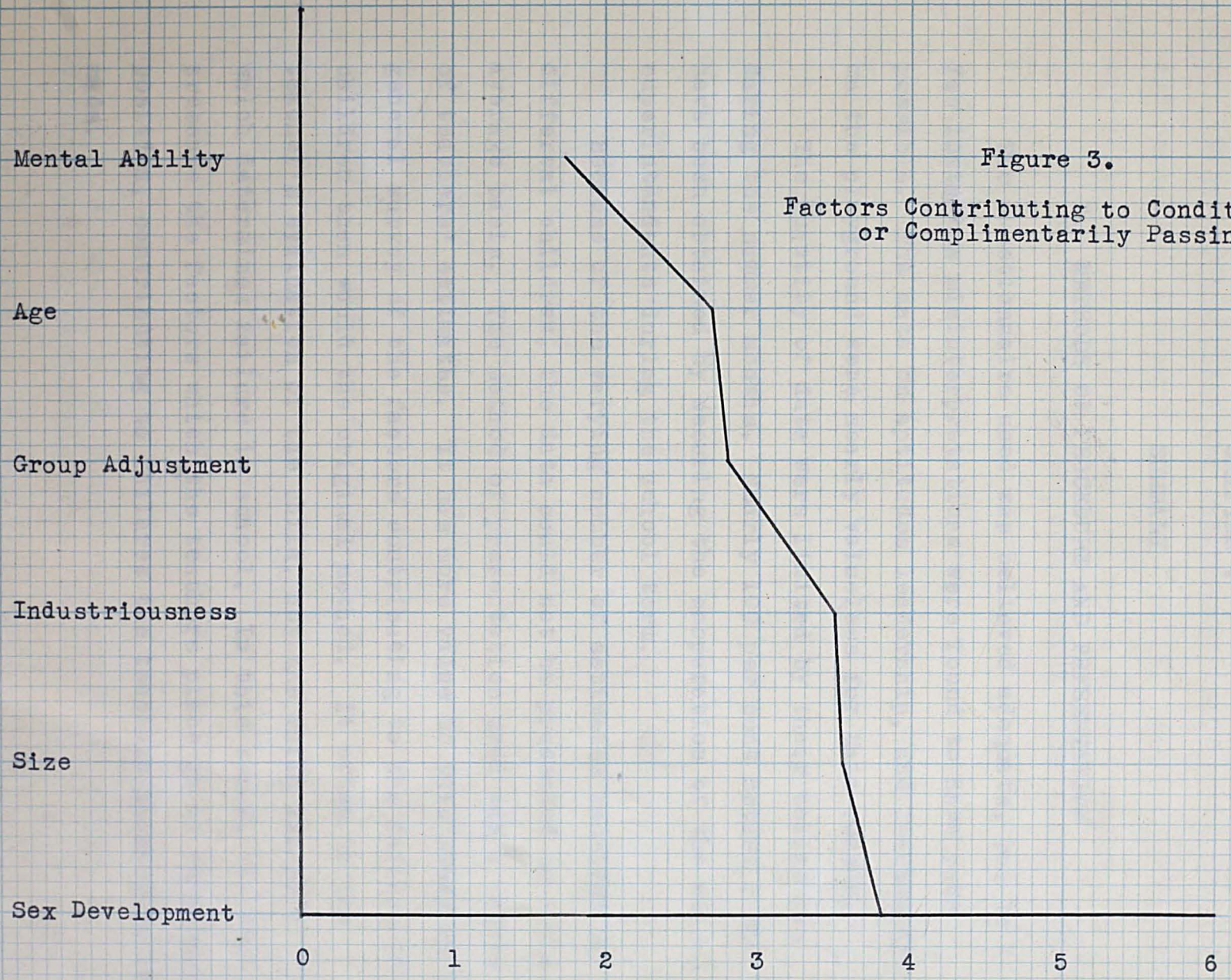


Figure 3.

Factors Contributing to Conditioning or Complimentarily Passing

# CHAPTER V

## SUMMARY

### I. METHODS OF PROCEDURE AND PRESENTATION

The questionnaire used was believed adequate, but in a few instances misinterpretations were found to have been possible. The data on aptitudes leadership, and leadership on the playground were nearly valueless for this reason.

The quantity of data were limited by their collection during the summer months. Nearly 100 per cent return could have been obtained by securing the cooperation of the school superintendents during the school term.

Because of the varying number of estimates received on different children, the data could not be presented on a child average basis. The method of presentation used was a survey of teachers' estimates. It has more value to this study as a general survey of the factors contributing to the failure of children than would the original method. It often is the teacher's evaluation of the child, not the child himself, which determines failure in school. In this sense, the study presents the factors which the teachers place in an unfavorable position, contributing to failures the teachers themselves have made.

## II. TRAITS OF PERSONALITY

Figure 2 indicates the undesirable traits which may have influenced the teacher to fail the child. Their significance may be due to the unfavorable influence on the teacher, to the influence of the trait on the educational achievement of the child, or the trait may be a result of other factors dealt with by the questionnaire. The data seem to indicate which traits are found in such a low degree as to cause failure, and which traits are found in this group to be about the same as in a normal group. There is no method of checking the accuracy of the estimations given except by comparison with objective studies, which have been included.

These estimations should be accurately made. "Essential educational habits not acquired at the proper age prevent the child from conforming to socially approved patterns of behavior and thus frequently result in the accommodation of withdrawal."[1] "Where trait actions are likely to be utilized constantly, and where they are also of a routine nature, they may wisely be developed as habits."[2] This group of traits seems to be of sufficient importance to merit attention on the part of the teachers to the extent at least of some uniformity in the bases for conclusions. The data were not complete in

---

[1] S. A. Queen, W. B. Bodenhafer, and E. B. Harper, Social Organization and Disorganization. p. 518.

[2] W. W. Charters, The Teaching of Ideals. p. 117.

every case for three estimates on each child, and a comparison of the estimates given. Where this was possible for comparison, the estimates were not always the same.

## III. PHYSICAL DEFECTS

Comparison of the data on physical deficiencies disclosed wide differences from the findings of other studies. Malnutrition was present in an unusually large number of cases, while deficiencies of the ears and teeth were very few. This indicates the possibility that local factors were influential, or that deficiencies difficult to observe are not discovered by most teachers. In the event the latter possibility is true, the importance of the following quotation is not appreciated. "The very healthy children were described as more satisfactorily adjusted than the average child in their classes in such traits as social adaptability, emotional stability, attitude toward assigned tasks, and general classroom behavior."[3]

## IV. SOCIAL ADJUSTMENT

The social maladjustments indicate unsatisfactory results from retardation. There is a large number of estimated maladjustments resulting from failure. This number is nearly as large as the number of maladaptations reported corrected by failure. The almost equal number of these two classes, and

---

[3] Carolyn Hoefer and M. C. Hardy, "The Role of Health in the Child's Development." Elementary School Journal. Vol. 35. February, 1935. p. 427.

the rank of social factors in Figures 2 and 3 seem to indicate disregard for the social adaptation of the child in school. "The traditional basis in homogeneously grouping children for promotion from grade to grade has been educational age. Perhaps the use of another basis for homogeneity, that of social age, will come more nearly to the fulfillment of our fundamental principle."[4]

## V. ENVIRONMENTAL FACTORS

Environmental factors were disregarded on so many questionnaires that a summary is difficult. The reason for the failure to check these may have been due to failure of memory. However, a more logical conclusion seems to be that the teachers were not always familiar with the home background of the child.

There were no standards with which to compare the economic bases used by the teachers. Tables XV and XVI offer a valid comparison between two parts of the group, those in whose families there was mental deficiency or crime and delinquency. There is a pronounced difference between these groups in home status, intelligence, and size of family. This indicates a close connection between delinquency and the economic status of the home. Mental deficiency, very low intelligence, and large families are correlates in Table XV. The amount of data for these groups was too small to justify valid conclusions

---

[4] J. R. Shannon, "A Philosophy of Fundamentals." Phi Delta Kappan. Vol. 15-16. February, 1933, pp. 150-152.

from these tables, and can be given only as indications. "Inherent in our data is the implication that there are many intangible, imponderable elements in community life that influence the ideas and attitudes of young people in ways that are productive of delinquency and crime. The general standards and community atmosphere in regard to lawbreaking must play an immensely important part."[5]

## VI. GRADE OF FAILURE

The data present the failures in the elementary grades. The practice in this county indicates a very negligible amount of failure after the fourth grade; over half the failures are made in the first grade. To the extent that this indicates immaturity at the age of entering school, this seems a basis for recommending later admission to school. Immaturity was not considered of high importance in Figure 2. Mastery of subject fundamentals seems to have been of more importance. This has been only partially successful in the 171 cases given in Table XXII. A possibility not included in the data should be given. Early failures due to mental retardation are made. The child may be conditioned in higher grades, because of a final recognition of mental inability to learn. This possibility is recognized and discarded by Shannon, "Children will be regarded as potentialities for development, rather than as automatons for teachers to teach."[6]

---

[5] Healy and Bronner, op. cit., p. 211.

[6] J. R. Shannon, "A Tale of Two Tin Cans." School and Society. Vol. 41. January to June, 1935. pp. 194-6.

## VII. TEACHERS' CRITERIA

Social and physical factors were not given extensive consideration. The most interesting point was that mental ability estimates would not be based on intelligence tests in most cases. Mental ability may have been interpreted as educational achievement to produce this separation.

Social adaptations of the child are not given important value in complimentarily passing of children. The greatest frequency is given to mental ability. Upon the final decision that the child is unable to progress educationally, it may be passed to the next grade. Table XVII indicates at what levels this conclusion is probably reached, and Figure 2 indicates that the conclusion is not reached objectively.

## VIII. GENERAL CONCLUSIONS

This study was intended for the pupose of acquiring information concerning the criteria for retardation of children, as they have been established by the teachers of one county.

It is a survey of the estimates of a part of the teachers of the elementary grades. More than one-half the elementary teachers of the schools from which data were collected contributed to the study.

The validity of the study would have been increased had it been possible to obtain data from all the elementary teachers

of the county. Variations might have been made by collection of more data in the cases in which the child was evaluated by only one teacher. A general indication of the practices of the teachers in regard to retardation seems valid, from the fact that the data included material from each school in the county, and from nearly one-half the possible sources of information in a large area.

A summary of the general conclusions which seem justified by the findings of this study follows:

1. Personal and mental traits possessed by the child are impressed upon the teacher.

2. Physical, social, and environmental aspects of the child's life are unfamiliar to the teacher, or are easily forgotten.

3. The educational influences of these latter traits are not sufficiently recognized by the teachers.

4. Children are retarded in their educational careers by conditions and traits, and the fact that various teachers notice and rate these conditions and traits differently, accounts for the wide variation in the degree of retardation.

"The individual who takes a job with skill and ability to perform the requirements of the job, with habits of initiative, industry, thoroughness, and dependability to make him a valuable asset in his work, and with personal characteristics of the adjusted individual, will contribute to the well-being of society. That an individual should acquire these skills,

abilities and habits, and interest in social welfare, and these personal characteristics, is the concern of education."[8]

---

[8] P. M. Symonds, Psychological Diagnosis of Social Adjustment. pp. 2-3.

BIBLIOGRAPHY


Abt, H. E., The Care, Cure, and Education of the Crippled Child. Elyria, Ohio: International Society for Crippled Children, 1924.

Ackerson, Luton, Children's Behavior Problems. Chicago: University of Chicago Press, 1931.

Ayres, L. P., Laggards in Our Schools. New York: Survey Associates, Inc., 1913.

Baker, H. J., Characteristic Differences in Bright and Dull Children. Bloomington, Illinois: Public School Publishing Company, 1927.

Bisch, L. E., Clinical Psychology. Baltimore: Williams and Wilkins Co., 1925.

Brown, A. W., The Unevenness of the Abilities of Bright and Dull Children. New York: Bureau of Publications, Teachers College, Columbia University, 1926.

Charters, W. W., The Teaching of Ideals. New York: McMillan Company, 1927.

Davis, G. P., What Shall the Public Schools Do For the Feeble-Minded? Cambridge, Massachusetts: Harvard University Press, 1927.

Elementary School Journal, "First Grade Progress in South Carolina". 34:88-91, October, 1933.

Greeman, F. N., Heredity and Environment in the Determination of Intelligence. Bulletin of School of Education, Indiana University, Vol. II (December, 1934), 19-27.

Healy, Wm., and Bronner, A. F., Delinquents and Criminals, Their Making and Unmaking. New York: MacMillan Co., 1926.

Hilleboe, G. L., Finding and Teaching Atypical Children. New York: Bureau of Publications, Teachers College, Columbia University, 1930.

Hoefer, Carolyn and Hardy, M. C., The Role of Health in the Child's Development. Elementary School Journal. 35: February, 1935.

Hollingsworth, L. S., "Special Disabilities that Contribute to Retardation in School Status." Ungraded. Vol. V. No. 3. December, 1919.

Illinois Normal Schools, The Relation of Certain Physical Defects in Children to their Progress in School. Macomb, Illinois: Western Illinois State Normal School. No. 8. September, 1918.

Indiana Board of State Charities. Bulletin 221. June, 1935. pp. 9-68.

Ingram, C. P., Education of the Slow Learning Child. Yonkers-on-Hudson, New York: World Book Co., 1935.

Kennedy-Fraser, David, Education of the Backward Child. London: University of London Press, Ltd., 1932.

Mallory, J. M., A Study of the Relation of some Physical Defects to Achievement in the Elmentary School. Nashville, Tennessee: George Peabody College for Teachers, 9:1-28, 1922.

Merry, R. V., Problems in the Education of Handicapped Children. Cambridge, Massachusetts: Harvard University Press, 1933.

McDowell, Elizabeth D., Educational and Emotional Adjustments of Stuttering Children. New York: Bureau of Publications, Teachers College, Columbia University. 1928.

McElwee, E. W., "A Comparison of the Personality Traits of 300 Accelerated, Normal, and Retarded Children." Journal of Educational Research, 26:31-34. September, 1932.

Metropolitan Life Insurance Company. Statistical Bulletin, Vol. 16, June, 1934.

Palmer, C. E., Growth and the Economic Depression. Published Health Report., Vol. 48:1277, October 20, 1933, in Economic Trends and the Weight of Children. School and Society. 39:251-252. February, 1934.

Paynter, R. H. and Blanchard, Phyllis, A Study of Educational Achievement of Problem Children. New York: The Commonwealth Fund, 1932.

Pintner, Rudolf, Intelligence Testing. New York: Henry Holt and Company, 1923.

Queen, S. A., Bodenhafer, W. B., and Harper, E. B., Social Organization and Disorganization. New York: Thomas Y. Crowell Company, 1935.

Richmond, W. V., An Introduction to Sex Education. New York: Farrar and Rinehart, 1934.

Shannon, J. R., A Philosophy of Fundamentals. Phi Delta Kappan. 15-16: 150-152. February, 1933.

Shannon, J. R., "A Tale of Two Tin Cans." School and Society. 41: 194-196. January-June, 1935.

Street, Roy F., Factors Related to Madadjustment in School. Elementary School Journal. 34:677-678. May, 1934.

Symonds, P. M., Psychological Diagnosis in Social Adjustment. New York: American Book Company, 1934.

Terman, L. M., The Intelligence of School Children. New York: Houghton Mifflin Company, 1919.

Terman, L. M. and Almack, J. C., The Hygiene of the School Child. New York: Houghton Mifflin Company, 1939.

Thurstone, L. L., Order of Birth, Parent Age, and Intelligence. Chicago: University of Chicago Press, 1931.

Time, Educational Supplement. April 20, 1936.

U. S. Office of Education Pamphlet, No. 49. 1934.

Wallin, J. E. W., The Education of Handicapped Children. New York: Houghton Mifflin Company, 1934.

Wallin, J. W., Studies of Mental Defects and Handicaps. New York: Houghton Mifflin Company, 1924.

White House Conference On Child Health and Protection of 1930. New York: Century Company, 1931.

White House Conference on Child Health and Protection. Section III, F. New York: Century Company, 1931.

White House Conference on Child Health and Protection. Section IV, B. New York: Century Company, 1933.

Wilson, T. F., Learning the Bright and Dull Children. New York: Bureau of Publications, Teachers College, Columbia University. 1928

Wooley, H. T., and Ferris, Elizabeth, Diagnosis and Treatment of Young School Failures. U. S. Bureau of Education, Bulletin No. 1. 1923.

# APPENDIX

# QUESTIONNAIRE

Name _____ Parent _____

School _____ failed: Year _____ Grade _____

Please check each item in which the pupil was defective, below normal, or carried after affects, etc.,

eyes_____ speech_____ height_____
ears_____ nutrition_____ teeth_____
limbs_____ weight_____

childrens diseases: infantile paralysis _____, St. Vitus dance _____, diphtheria _____, scarlet fever _____, meningitis _____, rickets _____.

---

Please check the degree which item was possessed by the pupil. in each

| TRAITS | Very low | Low | Average | Good | Superior |
|---|---|---|---|---|---|
| Aggressiveness | | | | | |
| Alertness | | | | | |
| Application | | | | | |
| Aptitude | | | | | |
| Attentiveness | | | | | |
| Carefulness | | | | | |
| Cheerfulness | | | | | |
| Confidence of playmates | | | | | |
| Consideration | | | | | |
| Cooperativeness | | | | | |
| Honesty | | | | | |
| Industriousness | | | | | |
| Intelligence | | | | | |
| Leadership | | | | | |
| Motor ability | | | | | |
| Neatness | | | | | |
| Nervous control | | | | | |
| Obedience | | | | | |
| Responsibility | | | | | |
| Sincerity | | | | | |
| Sportsmanship | | | | | |
| Sympathy | | | | | |
| Truthfulness | | | | | |

Please check each item which was applicable to the pupil.

QUESTIONNAIRE (Continued)

## GROUP ADJUSTMENT

Leader: in class _____, playground _____
Misfit in group: before failure _____ after failure ___
Played with: own sex ____, other sex ____, older pupils _____
younger pupils _____.

## HOME ENVIRONMENT

Squalid ____, poor ____, average _____, wealthy _____
Parent dead: mother ___, father ____, both ___ separated ___
Number of brothers living: older _____, younger _____
Number of sisters living: older _____, Younger _____
Number of brothers and sisters dead _____
Number of brothers or sisters failed in school _____
Mental defectives in family _____
Delinquencies or crimes in family _____